C.T.M. MOBILITY SCOOTER

HS-125 Instruction Booklet

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INTRODUCTION

Thank you and congratulations on purchasing your new C.T.M. Mobility Scooter. It is designed to provide you with transportation indoors and outdoors.

Chien Ti Enterprise Co., Ltd. is your manufacturer for the C.T.M. Mobility Scooter. We pride ourselves on providing safe and comfortable products. Our purpose is to give you the complete satisfaction you require. We sincerely hope that you will enjoy your C.T.M. Mobility Scooter.

Please read and observe all warnings and instructions given in the owner's manual for this unit before you use the various convenient functions of this scooter. Also, retain this book et for future reference.

If you have any questions, you can contact :

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or your local dealer:

IMPORTANT PRECAUTIONS

· Only one person at a time can ride a C.T.M. Mobility Scooter.

· Maximum load is 115 kgs/253 pounds.

· Turn key off before getting on or off.

· Always drive carefully and be aware of others using the same area as yourself.

· Always use pedestrian crossings where possible. Take extreme care crossing roads.

· Do not drive on slopes exceeding 8 degrees, and take extreme care when turning on slopes.

· Do not use full power when turning sharp corners.

· Take great care and use low speeds for backing up, downhill, over uneven surfaces, and curb climbing.

· Scooter may not operate well in high humidity.

· If you are caught in the rain, it is handy to carry a scooter canopy. This can offer complete protection for yourself and the scooter.

· Never put scooter in neutral on slopes.

· Follow traffic laws when you ride outside.

ELECTROMAGNETIC INTERFERENCE AND WARNINGS

CAUTION: It is very important that you read this information regarding the possible effects of Electromagnetic Interference on your motorized scooter.

Powered wheelchairs and motorized scooters may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones. The interference (from radio wave sources) can cause the motorized scooter to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the motorized scooter control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each motorized scooter can resist EMI up to a certain intensity. This is called its "immunity level." The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI. The immunity level of this motorized scooter model is 20 (V/m).

There are a number of sources of relatively intense electromagnetic fields in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warnings listed below, your risk to EMI will be minimized.

The sources of radiated EMI can be broadly classified into three types: :

1. Hand-held portable transceivers (transmitters-receivers) with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, "walkie talkie," security, fire, and police transceivers, cellular telephones, and other personal communication devices;

> ⚠ **Some cellular telephones and similar devices transmit signals while they are ON, even when not being used.**

2. Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances, and taxis. These usually have the antenna mounted on the outside of the vehicle; and
3. Long-range transmitters and transceivers such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

> ⚠ **Other types of hand-held devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, and cassette players, and small appliances, such as electric shavers and hair dryers, so far as we know, are not likely to cause EMI problems to your motorized scooter.**

Motorized Scooter Electromagnetic Interference :

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very close to the motorized scooter control system while using these devices. This can affect motorized scooter movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the motorized scooter.

Warnings :

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect motorized scooters. Following the warnings listed below should reduce the chance of unintended brake release or motorized scooter movement which could result in serious injury.

1. Do not operate hand-held transceivers (transmitters-receivers), such as citizens band (CB) radios, or turn ON personal communication devices, such as cellular phones, while the motorized scooter is turned ON;

2. Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them;

3. If unintended movement or brake release occurs, turn the motorized scooter OFF as soon as it is safe;

4. Be aware that adding accessories or components, or modifying the motorized scooter, may make it more susceptible to EMI; and

> ⚠ There is no easy way to evaluate their effect on the overall immunity of the motorized scooter.

5. Report all incidents of unintended movement or brake release to the distributor listed on the inside front cover of this manual. Note whether there is a source of EMI nearby.

Important Information :

1. 20 volts per meter (V/m) is a generally achievable and useful immunity level against EMI (as of May 1994). The higher the level, the greater the protection.

2. The immunity level of this product is 20 (V/m).

IDENTIFICATION OF PARTS

Before attempting to drive this scooter on your own, it is important that you familiarize yourself with the controls, and how to operate

Figure 1 - HS-125 Front View

Figure 2 - HS-125 Joystick

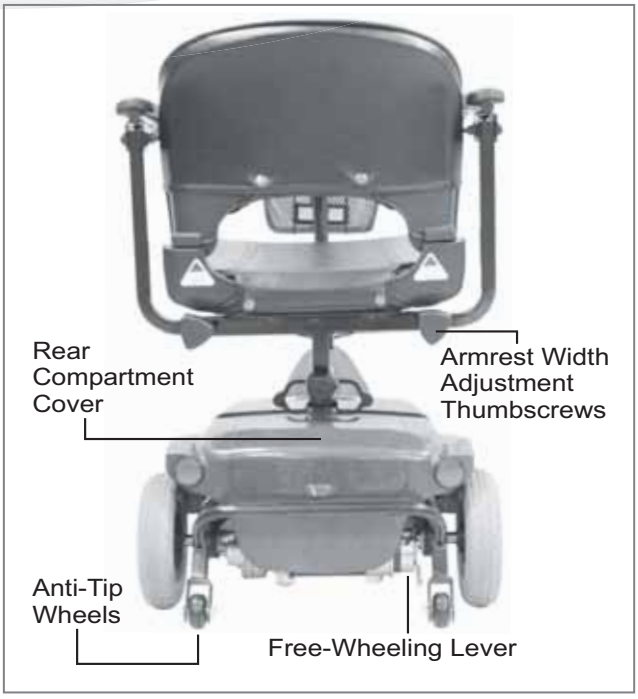

Figure 3 - HS-125 Rear View

Function Of Parts :

TOP CONTROL PANEL

· Speed Dial
The Rabbit means fast and Turtle is slow. By turning this you control the total speed transferred to the thumb controls.

· Self Diagnostic Warning Light
Flashing indicates problems with the scooter. See page 13 for more information.

· Battery Gauge
There are four red LED lights. When all LED are on, the batteries are fully charged. When only two lights are on, the batteries need to be recharged.

ADJACENT TO TOP CONTROL PANEL

· Thumb Lever
Pushing the right thumb lever moves the scooter forward. Pushing the left thumb lever moves the scooter backward. (This can be reversed if required by local dealer.) Releasing both engages the automatic brake. These are also your accelerator. The further you depress them, the faster you go. (Subject to the position of the Rabbit/Turtle control).

AT BASE OF STEERING TILLER

· Tiller Locker Latch Pawl
Turn the tiller locker latch pawl counterclockwise to loose. Raise Tiller upright. Hook the latch pawl over the cog and tighter clamp.

BELOW SEAT

· Seat Locker Knob
Turn the seat locker knob counterclockwise to loose. Turn it clockwise to lock the seat position.

· Seat Height Adjuster
There are three holes on the seat tube to adjust the seat height. Be sure the detent pin is fully inserted at its new height before sitting on the seat.

· Armrest width Adjustment Thumbscrews
Loosen the two thumbscrews to adjust the arm width; tighten again to lock in the desired position.

· Legroom Adjuster
There are few holes on the front and rear frame tube to adjust the legroom. Pull the toggle latch to loosen and insert the detent pin to locate the position. Push the toggle latch again to lock.

REAR BODY

· Rear Compartment Cover
Open the compartment Cover to access the on board charger.

· Anti-tip wheels
Helps keep the scooter from tipping over.

· Free-Wheeling Lever
When lever is in the N (Neutral) position, the scooter can be moved without power. When lever is in the D (Drive) position, the scooter can be driven. Normal position is D.

OPERATING YOUR SCOOTER

You can make the following adjustments to increase your comfort when driving.

· adjust seat height and location

· adjust armrest width to comfortable position.

· adjust legroom.

1.Before operating your scooter, check the following:

· free-wheeling device on D

· speed dial is at the turtle picture.

2.Sit on scooter and turn on key. All Battery Gauge LED Lights should be lit. The Self-Diagnostic Warning Light should not be blinking.

3.When your hands rest comfortably on the handlebars, the thumb control levers should be within easy reach. The right lever moves the scooter forward, the left one moves it backward. When you release both levers the scooter will stop.

> ⚠ This scooter has automatic braking systems. Release the thumb finger control and the brakes will stop the scooter.

4.Steer the scooter by turning the whole steering column the way you want to go.

5.Practice driving where there are no obstacles. Start at the slowest speed and drive forward and backward; make some turns. As you get more comfortable you can increase the speed by turning the speed dial toward the picture of the rabbit.

6.If two Battery Gauge LED Lights be lit you should plan to recharge the batteries very soon.

7.If the scooter stops, locate the circuit breaker on the top of the battery pack. Push it and try the scooter again.

8.When you are finished riding, turn off the key before getting off.

9.If you are finished riding for the day, immediately recharge the batteries.

See CHARGING THE BATTERIES, page 11.

Keep in mind these rules :

- Release thumb levers and allow scooter to stop completely before changing from forward to reverse, or reverse to forward.
- When turning a corner, swing the front wheels wide, because the back wheels will turn more tightly.
- Use the scooter only where it would be safe to walk.
- Use low speeds for reverse, downhills, ramps, curbs, or uneven surfaces.

Other Operating Information :

Hill climbing: You may need to use a higher speed. Turn to lower speed before going downhill.

Down slopes: To proceed down steep slopes slowly, set speed control in proximity of the turtle. This enables driver control, as the closer the speed control is set toward the turtle, the slower it will become. However, this scooter will not self accelerate down hills due to the automatic braking taking effect should you attempt to drive too fast.

Curb climbing: Approach slowly at right angles to the curb. A direct approach is needed. Do not attempt curb climbing greater than a 1.9" curb.

If Self-Diagnostic Warning Light starts to blink, identify the problem from the chart on page 13 and take action.

If the scooter breaks down and must be moved, get off the scooter, push the Free-Wheeling Lever to N, move the scooter slowly to a safe location, and move the lever back to D.

DISASSEMBLING YOUR SCOOTER

C.T.M. HS-125's compact design and light weight style fits easily into the trunk or back seat of most cars for transportation. No tools are necessary to disassemble scooter.

Remove the seat by loosening the seat Locker Knob (A) and then lift. away. (See Fig. 4)
Use the Battery Pack Handle (B) to pull the battery pack up and off from the scooter. (See Fig. 5)

Figure 4

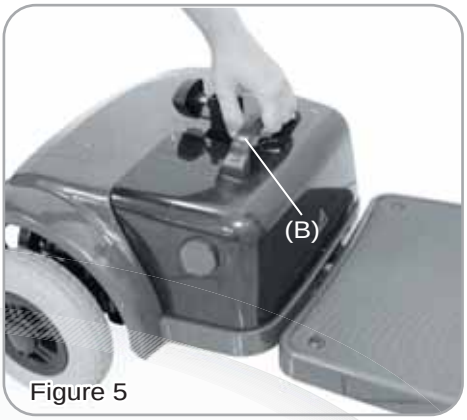

Figure 5

Remove the Front Basket (C) and place it off to the side. (See Fig. 6)
Adjust the Tiller Angle Adjustment (D) to the lower point. (See Fig. 7)

Figure 6

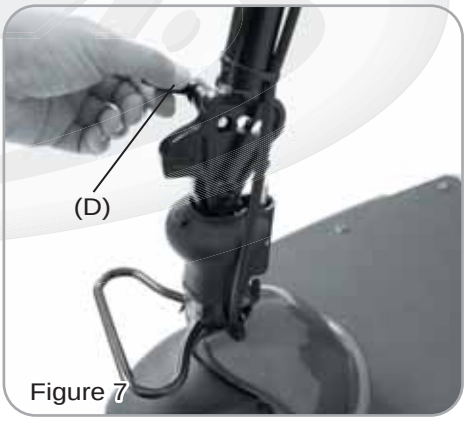

Figure 7

Pull out the Metal Locking Lever (E)and place it into the groove (F) located on the end of the legroom. (See Fig. 8)
There are 4 main parts after disassembling the scooter. (See Fig. 9)

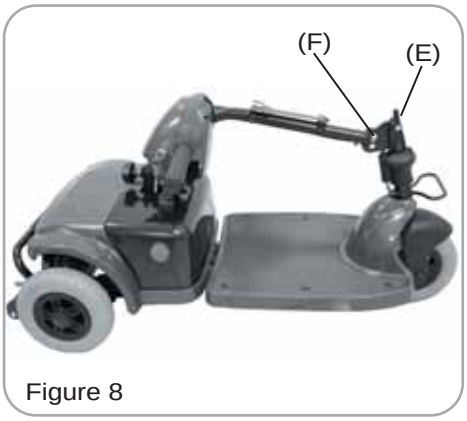

Figure 8

Figure 9

ASSEMBLING YOUR SCOOTER

To assemble the scooter, you can repeat the disassembly directions in reverse. Abbreviated directions are given below. Refer to the Figures on pages 9 locate the parts.

1.Adjust the Tiller Angle Adjustment (d) to fix the tiller into its upright position.

2.Place the front basket.

3.Place the battery pack in the battery compartment.

4.Place seat on seat post and tighten the seat locker knob.

CHARGING THE BATTERIES

Your C.T.M. scooter is equipped with two sealed, service free 12V. 12Ah. rechargeable batteries and one 24V. 2A charger. Batteries must be charged before using the scooter for the first time and should be recharged after each day's use. Be sure the scooter is not in free-wheeling mode.

1.Insert battery charger cord into the charger connector on the charger output. Refer to Figure 7. for correct position.

Figure 10

2.Plug the other end of the battery charger cable into a standard electrical wall outlet.

3.The battery charger lights will normally be red at this point.

4.Allow to charge until the right battery charger light turns green.

5.After the light turns green, unplug the battery charger from the scooter.

6.If at any time the right battery charger light flashes green over 40 minutes, this indicates abnormal charging occurred. You should check that:
- charger plugs are correctly positioned
- fuse is not burned out
- the scooter is turned off
- if none of these is a problem, contact your authorized dealer.

The time needed to recharge will vary depending on the depletion of the batteries. Charging for longer than necessary will not harm the batteries. They can not be overcharged.

Keep in mind these rules：

- Fully charge batteries at lease once a month, more if you use the scooter regularly. Charge after each trip exceeding 3 kilometers / 2 miles.
- If storing your scooter for some time (1 month or more) make sure that the batteries are fully charged, and on returning, charge them again before using scooter.
- Batteries will only give maximum performance after the scooter has been used, and the batteries have been recharged up to 10 times.

CARE AND MAINTENANCE

Cleaning Your Scooter :

If your scooter is dirty, use a damp or lightly soapy cloth to wipe it down. Do not use running water to wash or rinse the scooter in order to protect the electrical parts. Polish with an automotive liquid polish.

Maintaining Your Scooter :

All maintenance and repair of your scooter should be done by an authorized dealer. The following areas required periodic inspection:

- the signs of wear on the tires
- all electrical connections are firmly attached

Storing Your Scooter :

Between uses, your scooter is best stored in a dry location.

TROUBLESHOOTING

Here are some suggestions about solving problems you may have with your scooter. There is a Self-Diagnostic Warning Light on the Control Panel. To check the Self-Diagnostic Warning Light, turn on the key and count the number of blinks on the Warning Light.

Number of Flashes	Problem	Solution
1	Battery needs recharging	Recharge the batteries soon.
2	Battery voltage too low to operate scooter	Must recharge before using. Check battery condition and connections.
3	Battery voltage too high	Check battery condition and connections. Contact your authorized dealer to check your battery charger.
4	Short in motor	Contact your authorized dealer.
5	Brake malfunction	Contact your authorized dealer.
6	Transmission lever not in neutral	Contact your authorized dealer.
7	Transmission lever malfunction	Contact your authorized dealer.
8	Motor problems	Contact your authorized dealer.
9	Other internal errors	Contact your authorized dealer.

Other Problems :

During charging, the light on the charger does not change to green:
Contact your authorized dealer.

Scooter will not move when key is turned on:

1.Check Battery Gauge on the control panel. All the LED Lights should be on.

2.Check Self-Diagnostic Warning Light. It should be steady. If it is flashing, see chart on page 13 for problem identification.

3.Check all electrical connections to be sure they are tight.

4.If none of these correct the problem, contact your authorized dealer.

TECHNICAL SPECIFICATIONS

Overall Length	39.4"
Overall Width	18.5"
Overall Height	34.6"
Wheels: Front	8"
Wheels: Rear	8"
Weight w/ Batteries	81.6 lbs
Max. Speed	5 mph
Weight Capacity	253 lbs
Ground Clearance	1.4"
Grade Climbable	8 degree
Curb Climbing	1.6"
Turning Radius	39.6"
Suspension	N/A
Brake	Electro-Mechanical
Seat Type	Padded Foldable
Seat Width	16.7"
Motor Size	250W 4600 r.p.m
Battery	(2) 12V. 12Ah
Battery Weight	20.5 lbs
Travel Range	5.6 Miles
Battery Charger	2A On Board
Electronics	On / Off Key Switch, Battery Level Indicator, Speed Control Knob

*Subject to change without notice.(Issue A)